

Beronworth Standby Systems Limited

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Engineering Note 2 - Standby Inverter Systems

General Specification for Inverter Systems

1.1] All inverter systems are designed and assembled using a modular construction to enable them to be tailored accurately to a particular duty and to allow simple and rapid servicing and maintenance. Each system has a design life of at least 15 years and can be provided with a number of different style batteries.

1.2.1] The systems are designed to operate mains voltage luminaires where remote locations require power under emergency or standby conditions.

1.2.2] The following points give some of the major advantages over other types of emergency power systems:

- a) high efficiency from battery conversion to mains output
- b) full or near full brightness from luminaires under standby conditions
- c) servicing of system easy as everything is contained in one cubicle
- d) straightforward wiring without the need for heavy cables
- e) system operates at mains potential allowing long cable runs
- f) life span of equipment enhanced by mid life replacement of battery
- g) standard electronic luminaires can be used as emergency fittings
- h) price per VA favourable against individual single point fittings.

1.3] Inverter - this unit creates Alternating Current from a Direct Current source and transforms it to a higher voltage and comprises static transistorised components.

1.4] Status Monitor - this is provided by a relay module connected to the DC supply. The contacts are routed to Volt-free terminals so that a remote alarm may be installed.

2] Controls, Indicators and Monitors

The following features are incorporated:-

- 2.1] Mains ON indicator - this indicates that the system is accepting AC mains
- 2.2] Inverter ON Indicator - this shows that the output is operational
- 2.3] Low voltage, High voltage & Charge fail - this facility indicates the state of the battery.

Volt free contacts are optionally available for remote indication either via a small panel or through a Building Management System where state of the art technology can give up to the minute warnings of any potential problem.

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